



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,724	02/03/2004	James E. Chomas	2003P14530US	2282
7590 Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			EXAMINER MEHTA, PARIKHA SOLANKI	
			ART UNIT 3737	PAPER NUMBER
			MAIL DATE 11/04/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/770,724

**Applicant(s)**

CHOMAS ET AL.

**Examiner**

PARIKHA S. MEHTA

**Art Unit**

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-8,10-12,14-23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-3,5-8,10-12,14-23 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 20 April 2007 has been entered.

2. This application is in condition for allowance except for the following formal matters:

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for adaptively varying gain during ultrasound contrast agent quantification.

### ***Claim Objections***

4. Claims 1-3, 5-8, 10-12, 14-23 and 25-27 are objected to because of the following informalities:

Claim 1 recites, in step c1, "the region" without proper antecedent basis.

Claim 1 recites, in step c1, "contrast agent" where "the contrast agent" should appear.

Claim 1 recites, in step c2, "an ultrasound" where "the ultrasound" should appear.

Claim 1 recites, in step d, "contrast agent" where "a contrast agent" should appear.

Claim 2 recites "contrast agent" where "the contrast agent" should appear.

Claim 6 recites, in line 2, "contrast agents" where "the contrast agent" should appear.

Claim 6 recites, in step f, "contrast agent" where "the contrast agent" should appear.

Claim 7 fails to further limit the steps of the invention; claim 1 sets forth that the normalization is automatic, which is inherently free of user input.

Art Unit: 3737

Claim 11 implies that the contrast agent quantification procedure includes a step of transmitting acoustic energy to destroy contrast agents; however, claim 6 implies that the step of destroying is separate from the quantification. It is not clear which embodiment accurately claims Applicant's invention.

Claim 11 recites steps c1 and c2, which are already set forth by claim 1.

In claim 12, the limitations set forth therein do not clearly set forth how step b is responsive to step a as recited.

Claim 12 recites, in step a, "contrast agent" where "a contrast agent" should appear.

Claim 12 recites, in step d, "contrast agent" where "the contrast agent" should appear.

Claim 16 recites, in step b2, "contrast agent values" where "the contrast agent intensity values" should appear.

Claim 16 recites, in step d, "contrast agent" where "the contrast agent" should appear.

Claim 17 recites in step a, "contrast agents" where "a contrast agent" should appear.

Claim 17 recites, in step d, "contrast agent" where "the contrast agent" should appear.

Claim 21 recites "contrast agents" where "the contrast agent" should appear.

Claim 23 recites, in step a, "contrast agents" where "a contrast agent" should appear.

Claim 23 recites, in step c, "contrast agents" where "the contrast agent" should appear.

Claim 25 recites "contrast agents" where "the contrast agent" should appear.

Appropriate correction is required.

#### ***Allowable Subject Matter***

5. Claims 1-3, 5-8, 10-12 and 14-24 would be allowable if rewritten to overcome the claim objections set forth herein. The prior art of record does not fairly teach or suggest methods of automatic gain setting in ultrasound contrast imaging, particularly wherein an adaptively varied gain is associated with mapping tissue values within an image to a substantially constant low value.

#### ***Conclusion***

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ruth S. Smith/  
Primary Examiner, Art Unit 3737

/Parikha S Mehta/  
Examiner, Art Unit 3737